

## ABSTRACT

In a legged mobile robot (10), each hip joint (18R, 18L) that connects a body (14) with a thigh link (16R, 16L) comprises a first rotary shaft (18RZ, 18LZ) that provides a degree of freedom to rotate about a yaw axis (Z axis), a second rotary shaft (18RX, 18LX) that provides a degree of freedom to rotate about a roll axis (X axis), and a third rotary shaft (18RY, 18LY) that provides a degree of freedom to rotate about a pitch axis (Y axis), and in addition thereto, a fourth rotary shaft (18RR, 18LR) that provides a redundant degree of freedom. Owing to this configuration, the amount of body (14) bending and the movable range of the legs (12R, 12L) can be increased, thereby improving the degree of posture and gait freedom.